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The reasons of low efficiency of oil extraction from reservoirs of the Vereyskian horizon at Akanskoye oilfield

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Abstract

The authors researched oil reservoirs of Vereyskian horizon at Akanskoye oilfield. Oilfield is located on the east of the Melekess depression (the Tatarstan Republic). Two types of reservoir were identified: clastic and carbonate. Clastic type is presented by sandstones, and carbonate is presented by bioclastic, fine grained limestone. Geophysical data show that reservoirs are low productive, but in core samples they are characterized by regular, uniform oil saturation. By methods of optic-microscopic researches and nuclear magnetic resonance it was established that sandstones and limestones have a good petrophysical properties. Studying of composition of the water oil fluids, which are filling pore space of reservoirs are showed the high share of water and motionless hydrocarbons. In general, we consider low productive of Vereyskian reservoirs is result of oil oxidation processes, including content of authigenous dolomite and calcite as indicator of water-flooding processes. Obviously that extent of water-flooding in multilayer reservoirs is various. This cause low productivity some reservoirs.

Keywords

Akanskoye oilfield, Fluid coposition, Petrophysical properties, Reservoirs, Vereysky horizon